

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application. Please cancel claim 10 without prejudice and amend claims 1-6, 11, 13, 14 and 16 and add new claim 18 as follows:

LISTING OF CLAIMS:

1. (Currently Amended) A connector comprising:
a housing provided with a fluid passage in its interior and a connection port for engagement with a tube; and
a valve of an elastic material accommodated in said housing; wherein
said valve has a cylindrical base which is tapered such that a wall thickness gradually increases toward a distal end; a valve portion on one axial end of said base which becomes in contact with said tube to be pushed inward by said tube; and a slit formed in said valve portion which opens when said valve portion is pushed inward, wherein the slit has a size such that said tube cannot penetrate through the slit upon opening of said slit ; and
said valve undergoes elastic deformation when said tube is engaged with said connection port of the housing by pushing said tube against said valve portion of the valve, and said slit opens as a result of said elastic deformation, and a base of which the wall thickness gradually increases toward the distal end causes a larger deformation on a proximal side than a distal side because of lower flexural strength on the proximal side, such that said valve portion becomes in close contact with distal end surface and distal peripheral surface of said tube.

2. (Currently Amended) A connector according to claim 1, comprising
~~a housing provided with a fluid passage in its interior and a connection port for~~
~~engagement with a tube; and~~
~~a valve of an elastic material accommodated in said housing; wherein~~
~~said valve has a cylindrical base; a valve portion on one axial end of said~~
~~base which becomes in contact with said tube to be pushed inward by said tube; and~~
~~a slit formed in said valve portion which opens when said valve portion is pushed~~
~~inward; and~~
~~said valve undergoes elastic deformation when said tube is engaged with said~~
~~connection port of the housing by pushing said tube against said valve portion of the~~
~~valve, and said slit opens as a result of said elastic deformation and said tapered~~
~~base in which the wall thickness gradually increases toward the distal end becomes~~
~~folded such that said valve portion enters the interior of said vase base and a new~~
~~interior surface defined by the folded valve portion becomes in close contact with~~
~~distal peripheral surface of said tube.~~

3. (Currently Amended) A connector comprising;
a housing provided with a fluid passage in its interior and a connection port for
engagement with a tube; and
a valve of an elastic material accommodated in said housing; wherein
said valve has a cylindrical base which is tapered such that a wall thickness
gradually increases toward a distal end; a valve portion on one axial end of said
base which becomes in contact with said tube to be pushed inward by said tube; and
a slit formed in said valve portion which opens when said valve portion is pushed

inward, wherein the slit has a size such that said tube cannot penetrate through the slit upon opening of said slit; and

said valve undergoes elastic deformation when said tube is engaged with said connection port of the housing by pushing said tube against said valve portion of the valve, and said slit opens as a result of said elastic deformation such that said base becomes compressed in the axial direction to become dilated, such that a base of which the wall thickness gradually increases toward the distal end causes a larger deformation on a proximal side than a distal side because of lower flexural strength on the proximal side.

4. (Currently Amended) A connector comprising:

a housing provided with a fluid passage in its interior and a connection port for engagement with a tube; and

a valve of an elastic material accommodated in said housing; wherein

said valve has a cylindrical base which is tapered such that a wall thickness gradually increases toward a distal end; a valve portion on one axial end of said base which becomes in contact with said tube to be pushed inward by said tube; and a slit formed in said valve portion which opens when said valve portion is pushed inward, wherein the slit has a size such that said tube cannot penetrate through the slit upon opening of said slit; and

said valve undergoes elastic deformation when said tube is engaged with said connection port of the housing by pushing said tube against said valve portion of the valve, and said slit opens as a result of said elastic deformation, and a base of which the wall thickness gradually increases toward the distal end causes a larger

deformation on a proximal side than a distal side because of lower flexural strength on the proximal side, such that said valve portion becomes in close contact with said tube and the area of contact enters the interior of said base.

5. (Currently Amended) A connector comprising:

a housing provided with a fluid passage in its interior and a connection port for engagement with a tube; and

a valve of an elastic material accommodated in said housing; wherein

said valve has a cylindrical base which is tapered such that a wall thickness gradually increases toward a distal end; a valve portion on one axial end of said base which becomes in contact with said tube to be pushed inward by said tube; and a slit formed in said valve portion which opens when said valve portion is pushed inward, wherein the slit has a size such that said tube cannot penetrate through the slit upon opening of said slit; and

said valve undergoes elastic deformation when said tube is engaged with said connection port of the housing by pushing said tube against said valve portion of the valve, and said slit opens as a result of said elastic deformation with the base being dilated; and a space is defined between said base and said housing to allow said dilatation of the base and a base of which the wall thickness gradually increases toward the distal end causes a larger deformation on a proximal side than a distal side because of lower flexural strength on the proximal side..

6. (Currently Amended) A connector comprising:

a housing provided with a fluid passage in its interior and a connection port for engagement with a tube; and

a valve of an elastic material accommodated in said housing; wherein

said valve has a cylindrical base end; a valve portion on one axial end of said base which becomes in contact with said tube to be pushed inward by said tube; a slit formed in said valve portion which opens when said valve portion is pushed inward; and a fixture portion on the other axial end of said base, said fixture portion securing said valve against said housing; and

said housing has a relief space defined in its interior to thereby allow moving of fixture portion of said base into said relief space;

said valve undergoes elastic deformation when said tube is engaged with said connection port of the housing by pushing said tube against said valve portion of the valve, and said slit opens as a result of said elastic deformation with the fixture portion of said base being pushed into said relief space.

7. (Original) A connector according to claim 6 wherein said base becomes compressed in the axial direction to become dilated when said tube is pushed against said valve portion of the valve.

8. (Previously Presented) A connector according to claim 6 wherein a space is defined between said base and said housing to allow said dilatation of said base.

9. (Previously Presented) A connector according to claim 1 wherein said valve restores its original shape when said tube is disengaged from said connection port.

Claim 10 (Canceled).

11. (Currently Amended) A connector according to claim ~~40~~ 1 wherein said valve portion has a thick area in the central region, and said slit is formed in said thick area.

12. (Previously Presented) A connector according to claim 1 wherein at least a part of said base is tapered such that outer diameter or inner diameter increases with increase in the distance from said valve portion.

13. (Currently Amended) A connector according to claim 1 wherein said valve portion has a projection and/or a recess on the surface that becomes in contact with ~~distal end surface~~ said connection port of said tube.

14. (Currently Amended) A connector according to claim 13 wherein said valve portion has a first projection on the surface that becomes in contact with said ~~distal end surface~~ connection port of the tube.

15. (Original) A connector according to claim 14 wherein said first projection has a shape resembling a dome.

16. (Currently Amended) A connector according to claim 1 wherein said valve portion has a projection on the surface that does not become in contact with said connection port distal end surface of the tube.

17. (Original) A connector according to claim 16 wherein said projection constitutes a part of a sphere.

18. (New) A connector comprising:
a housing provided with a fluid passage in its interior and a connection port for engagement with a tube; and

a valve of an elastic material accommodated in said housing; wherein
said valve has a cylindrical base which is tapered such that a wall thickness gradually increases toward a distal end; a valve portion on one axial end of said base which becomes in contact with said tube to be pushed inward by said tube; a slit formed in said valve portion which opens when said valve portion is pushed inward; and a fixture portion on the other axial end of said base, said fixture portion securing said valve against said housing, wherein the slit has a size such that said tube cannot penetrate through the slit upon opening of said slit; and

said housing has a relief space defined in its interior to thereby allow moving of the fixture portion of said base into said relief space;

said valve undergoes elastic deformation when said tube is engaged with said connection port of the housing by pushing said tube against said valve portion of the valve, and said slit opens as a result of said elastic deformation and a base of which

the wall thickness gradually increases toward the distal end causes a larger deformation on a proximal side than a distal side because of lower flexural strength on the proximal side, such that the fixture portion of said base being pushed into said relief space.